

WASTEWATER MANAGEMENT PLAN FINANCIAL ANALYSIS

INTRODUCTION

The primary goal of the financial analysis is to develop a multi-year rate strategy that will provide stable revenue to meet the total operating and capital costs of providing wastewater service in the City of Olympia (City). The financial analysis focuses on the amount of revenue needed to meet the system's total financial obligations which include:

- ◆ Fiscal policies
- ◆ Operating and maintenance costs
- ◆ Administration and overhead
- ◆ Capital costs
- ◆ Existing and new debt service obligations

In particular, the financial analysis evaluates the financial impact related to the completion of the 20-year Capital Facilities Plan (CFP) and develops a rate strategy for meeting these future costs.

FINANCIAL STRUCTURE

The City's wastewater utility is responsible for funding all of its related costs through user fees. It does not depend on general tax revenues or general fund resources. The primary source of funding for the wastewater utility is wastewater rate revenue; miscellaneous operating revenues and investment earnings provide additional resources to fund the wastewater utility's revenue needs.

The City maintains a fund structure and implements financial policies targeting management of a financially viable utility enterprise. The following funds are relevant to this analysis.

- ◆ Wastewater Operating Fund (Fund 402): Includes unrestricted resources that are used to fund operation and maintenance (O&M) expenses and all other costs that are not covered by other funds. Wastewater rate revenue and other operating revenues go into this fund.
- ◆ Wastewater Capital Fund (Fund 462): Includes resources that are restricted or otherwise set aside for capital purposes, such as general facility charges (GFCs) and debt proceeds. The City funds its capital facilities plan (CFP) projects through this fund.
- ◆ Water / Sewer Bond Redemption Fund (Fund 417): Includes resources set aside to repay the water and wastewater utility's outstanding revenue-bond debt service. It may also include (as a restricted sub-account) the reserve account required by the City's outstanding bond covenants.

FISCAL POLICIES

This analysis is based on a framework of fiscal policies that promote the financial integrity and stability of the wastewater utility. A brief summary of the key financial policies employed by the wastewater utility, as well as those recommended and incorporated in the financial program are discussed below.

Reserve Funds

Like any business, a municipal utility requires certain minimum levels of cash reserves to operate – these reserves address variability and timing of expenditures and receipts, as well as occasional disruptions in activities, costs or revenues. Given the wastewater utility’s responsibility to provide an essential service at a certain standard, protection against financial disruptions is even more important than it would be for a private sector or non-essential counterpart.

In addition to protecting the utility against financial disruption, a defined reserve structure serves to maintain appropriate segregations of funds and to promote the use of resources for their intended purposes. This analysis assumes the following policy requirements for the wastewater utility’s reserves:

- ◆ The Operating Fund is assumed to maintain a minimum reserve balance equal to 10% of annual operating expenses, excluding payments to the Lacey, Olympia, Tumwater, and Thurston County Alliance (LOTT) for wastewater treatment service. This policy intends to provide liquid “working capital” to accommodate cash balance fluctuations associated with differences in revenue and expense cycles along with other unforeseen variations in revenues or costs.
- ◆ The Capital Fund is assumed to maintain a minimum reserve balance equal to 5% of active capital appropriations as a capital contingency reserve. This policy intends to provide a source of funding for unanticipated capital needs, such as project cost overruns.
- ◆ Assuming that it includes the reserve account specified in the City’s bond covenants, the Water/Sewer Bond Redemption Fund has a minimum target balance defined by the covenants (equal to the lesser of 1.25 times total annual revenue bond debt service, maximum annual revenue bond debt service, and 10% of the bond principal issued). The 2010 Bond Official Statement indicates that the City has purchased insurance to meet the reserve account requirements for the 2001 and 2007 Water/Sewer Bonds, and has funded the requirement for the 2010 Bond through bond proceeds.

Capital Investment

The City has established two major policies related to capital investment.

- ◆ **Existing ratepayers should bear a cost commensurate with the full cost of providing service.** This “full cost” includes both cash outlays and the decline in useful life of existing infrastructure (which is not a direct cash expense until asset replacement is required). Existing customers benefit from a system of infrastructure that has been funded through a combination of sources; this infrastructure deteriorates over its useful life and will eventually fail, requiring replacement.
- ◆ **New development should make an equitable financial contribution to the wastewater utility.** The general facility charge (GFC) is a mechanism that promotes equity between existing and future customers, representing a pro rata share of system capital costs attributable to new

development. As provided for in Section 35.92.025 of the Revised Code of Washington (RCW), new customers pay the GFC as a condition of receiving utility service.

There are numerous approaches to defining a benchmark for appropriate reinvestment. In 1996, the City established a standard of requiring rates to fund capital investment at a level commensurate with the annual depreciation of existing wastewater infrastructure assets. This funding is first used to pay current wastewater utility debt principal repayment obligations and any remaining amount becomes a source of future capital project funding. This policy effectively results in the City funding annual replacement at an amount equal to annual depreciation expense, net of debt principal payments. While this approach does not ensure full cash funding of system replacements, it provides a reasonable basis for equitably charging current customers for the use and decline in value of the system. It is consistent with standard accounting practices and is a commonly used benchmark in the industry. In most cases, it provides a major source of capital reinvestment, which can be augmented with judicious use of debt financing to meet scheduling requirements.

Debt

It is prudent to consider policies related to debt management as part of the broader utility financial policy structure. Debt management policies should be evaluated and formalized including the level of acceptable outstanding debt, debt repayment, bond coverage and total debt coverage targets.

The wastewater utility's revenue bonds require a minimum annual debt service coverage ratio of 1.25. In other words, this requires that the City set wastewater rates so that "net revenues" (defined in the City's bond covenants, but can generally be thought of as operating revenues net of cash operating expenses) are equal to at least 1.25 times the annual revenue bond debt service. The wastewater utility must meet this coverage requirement annually. Because the coverage test is an evaluation of annual performance, use of reserves generally does not count toward coverage – as an exception, the 2010 Bond covenants discuss a Rate Stabilization Account from which the City may draw funds to meet coverage requirements (for consistency, deposits into the Rate Stabilization Account are considered to be expenses in the calculation of bond coverage).

In this revenue bond coverage test, all subordinate debt is excluded from the calculation on the premise that such debt would hold a junior position and would only be repaid after revenue bond payments are satisfied. In practice, a revenue bond coverage factor of 1.25 could actually result in negative cash flow after all debt service is paid. However, the City's wastewater utility has consistently exceeded its test threshold and is projected to continue to adjust its wastewater rates as needed to meet current and future debt service coverage obligations.

OPERATING REVENUE & EXPENSE FORECAST

The financial analysis establishes the required revenue to meet the total system costs of providing wastewater services, both operating and capital. The operating costs identify ongoing annual non-capital costs associated with the operating, maintenance and administration of the wastewater system. Operating costs are initially based on the 2013 Budget, and are generally projected for future years based on assumed inflation rates.

- ◆ Most operating costs are increased with anticipated inflation in the Seattle Consumer Price Index (CPI), which is assumed to vary between 1.8% to 2.1% per year based on the March 2013 forecast published by the State Economic and Revenue Forecast Council. Beyond the five-year period covered in the State's forecast, this analysis assumes an annual CPI inflation

rate of 3.0%. Because LOTT's 2013 Budget indicates that inflation-based rate adjustments are planned through 2018, the City's payments to LOTT are assumed to increase with inflation.

- ◆ Variable operating costs such as electricity are assumed to change over time with both CPI inflation and assumed changes in water demand. Consistent with the planning efforts underlying the City's water rates, this analysis assumes that per-capita water demands will continue to decrease by 1.0% – 2.0% per year for the next few years – given that the Thurston Regional Planning Council has projected comparable increases in the population during the study period, this assumption results in a forecast of water demand (as a proxy to wastewater flows) that declines slightly over the next several years.
- ◆ Taxes are calculated based on projected revenues and applicable tax rates.
 - State excise taxes are computed based on projected revenues and the methodology developed as part of the excise tax refund claim that FCS GROUP completed for the City in 2005. Most operating revenues (net of payments to LOTT) are taxed at an effective rate of roughly 3% (assuming that 34.65% is allocable to transmission and taxed at 1.8%, and the remainder is allocable to collection and taxed at 3.852%). GFC revenues and miscellaneous operating revenues are taxed at the business and occupation (B&O) tax rate of 1.8%. The B&O tax rate is currently at 1.8% due to a temporary increase that is supposed to expire effective July 1, 2013 – beyond that date, this analysis assumes that the B&O tax rate decreases to its historical level of 1.5%.
 - Olympia utility taxes are computed as 10% of rate revenue (under City and LOTT rates) and other operating revenue. Consistent with the 2013 Budget, this analysis projects about \$1.6 million per year in City utility taxes given budgeted revenues at current rates.
 - Tumwater utility taxes are based on 6% of rate revenue received from customers that are within Tumwater's corporate boundaries. The 2013 Budget projects about \$100 for these taxes, suggesting that the City collects about \$1,700 per year from these customers.
- ◆ Rate revenues are assumed to increase with growth in the customer base. Rate revenue from fixed charges (estimated to be about 87% of total rate revenue) is assumed to increase with population growth, which based on the Thurston Regional Planning Council's forecast is expected to occur at a rate of 1.2% – 1.9% per year. Rate revenue from volume charges is assumed to grow with water demands, which as discussed above are actually expected to decline over the next few years.
- ◆ LOTT rate revenues are assumed to be equal to projected LOTT expenses.
- ◆ Investment earnings are calculated from projected fund balances, assuming a near-term earnings rate of 0.5% – 1.0% per year.

CAPITAL REVENUE AND EXPENSE FORECAST

Capital Facilities Plan (CFP) project costs are typically funded through a mix of existing cash balances, GFC revenues, grants, and new debt proceeds. Given the timing and magnitude of these costs, utility rates are more commonly used to pay for annual debt service associated with these projects (though certain projects or portions of project costs can be funded through rates).

Table 1 summarizes the 20-year CFP:

Table 1: CFP Project Cost Summary (\$ Thousands)

| Project | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 - 2033 | Total |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|
| 9021 - Asphalt Overlays | \$ 10 | \$ 11 | \$ 11 | \$ 12 | \$ 12 | \$ 13 | \$ 289 | \$ 357 |
| 9703 - Replacements and Repairs | 815 | 515 | 733 | 553 | 423 | 559 | 12,747 | 16,344 |
| 9806 - Lift Stations | 3,752 | 1,100 | 250 | 750 | 60 | 900 | 9,580 | 16,392 |
| 9808 - Sewer System Planning | 20 | 21 | 22 | 23 | 24 | 26 | 580 | 716 |
| 9809 - Sewer System Extensions | - | - | - | - | - | 750 | - | 750 |
| 9813 - Onsite Sewage System Conversions | 100 | 650 | 158 | 165 | 749 | 182 | 8,593 | 10,597 |
| 9903 - Infrastructure Pre-Design | - | 37 | 39 | 41 | 43 | 45 | 1,030 | 1,236 |
| Total | \$ 4,697 | \$ 2,334 | \$ 1,213 | \$ 1,544 | \$ 1,311 | \$ 2,475 | \$ 32,819 | \$ 46,392 |

The capital project costs shown in **Table 1** were provided by City staff, and reflect an adjustment for assumed construction cost inflation at a rate of 5.0% per year.

The financial forecast includes the development of a funding strategy for the costs shown in **Table 1**. The capital financing strategy is based on the following principles:

- ◆ Any grants or contributions would be applied first to cover eligible project costs. *This analysis does not assume the availability of any such funds.*
- ◆ Low-cost loans, such as Public Works Trust Fund (PWTF) or State Revolving Fund (SRF) loan proceeds, would then be applied to eligible project costs. *This analysis does not assume the availability of any new loans.*
- ◆ The utility's cash resources are then applied as available to cover costs in excess of any grants or loans. Sources of cash for this purpose include the existing Capital Fund balance, GFC revenues, unspent bond or loan proceeds, rate-funded transfers for system reinvestment, and other transfers from the Operating Fund.
- ◆ Revenue bonds are issued to fund costs that exceed the utility's available cash resources. *This analysis assumes that the City would issue 20-year bonds with an interest rate of 4%.*

Table 2 summarizes the 6-year capital financing strategy:

Table 2: Proposed CFP Funding Strategy

| Project | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Total |
|--------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------|
| Total Capital Costs | \$ 4,697,000 | \$ 2,333,700 | \$ 1,213,000 | \$ 1,543,800 | \$ 1,311,100 | \$ 2,474,900 | \$ 13,573,500 |
| Planned Funding Strategy | | | | | | | |
| Cash | \$ 4,697,000 | \$ 2,333,700 | \$ 1,213,000 | \$ 1,543,800 | \$ 1,311,100 | \$ 2,474,900 | \$ 13,573,500 |
| Total | \$ 4,697,000 | \$ 2,333,700 | \$ 1,213,000 | \$ 1,543,800 | \$ 1,311,100 | \$ 2,474,900 | \$ 13,573,500 |

| Projected Capital Fund Activity | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------------------|-------------------|-------------------|------------------|------------------|------------------|-------------------|
| Beginning Balance | \$ 3,662,120 | \$ 682,143 | \$ 161,106 | \$ 862,892 | \$ 2,090,352 | \$ 3,813,959 |
| Plus: Interest Earnings | 7,324 | 3,411 | 806 | 4,314 | 20,904 | 38,140 |
| Plus: GFC Revenue | 968,398 | 1,067,252 | 1,113,980 | 1,866,946 | 1,962,165 | 2,062,242 |
| Plus: Replacement Funding | 741,301 | 742,000 | 800,000 | 900,000 | 1,051,639 | 1,007,454 |
| Less: Capital Expenditures | (4,697,000) | (2,333,700) | (1,213,000) | (1,543,800) | (1,311,100) | (2,474,900) |
| Ending Balance | \$ 682,143 | \$ 161,106 | \$ 862,892 | \$ 2,090,352 | \$ 3,813,959 | \$ 4,446,895 |
| <i>Minimum Balance</i> | <i>\$ 234,850</i> | <i>\$ 116,685</i> | <i>\$ 60,650</i> | <i>\$ 77,190</i> | <i>\$ 65,555</i> | <i>\$ 123,745</i> |

Table 2 indicates that the City will have enough cash resources to pay for the projected capital costs without any additional debt issuance. This finding relies on the following assumptions:

- ◆ GFC revenue collections are projected increase from \$1.0 million to \$2.0 million per year by the end of the near-term forecast. This increase is attributable to higher population growth projections beginning in 2016, but also reflects the assumption that the GFC is increased annually with inflation (as measured by the 20-City average ENR Construction Cost Index). Because ENR does not forecast future cost inflation, this analysis assumes that the ENR Construction Cost Index increases at the historical five-year average rate of 3.16% per year.
- ◆ Rate-funded replacement funding transfers are initially assumed to provide about \$741,000 in funding for capital projects based on the 2013 Budget. Consistent with prior policy recommendations, the amount of the transfers is benchmarked to annual depreciation expense net of debt principal payments – this analysis assumes that the transfers are increased gradually to reach this targeted funding level by 2017.

In the event that CFP project costs exceed the estimates developed by City staff or cash funding sources fall short of the projections developed as part of this analysis, the City can transfer funds from the Operating Fund or consider deferring projects as an alternative to debt issuance.

Given the capital funding strategy shown in **Table 2**, the near-term financial forecast does not show any direct rate funding for the capital projects identified in the CFP. However, there are certain capital-related costs that will impact the estimated revenue needs:

- ◆ **Debt Service:** The wastewater utility currently has payment obligations for two revenue bonds. It is responsible for paying for 6.58% of the debt service related to the 2001 Water & Sewer Revenue Bond, and all of the debt service associated with the 2010 Water & Sewer Revenue Bond. In addition, it has two outstanding loans: 1 PWTF loan for the Sleater-Kinney Sewer Line, and 1 SRF loan for the City's septic conversion program. The wastewater utility's annual debt service expense varies from \$595,000 – \$624,000 over the near-term planning horizon.
- ◆ **Replacement Funding:** As shown in **Table 2**, rates are expected to fund a replacement funding transfer for about \$741,000 in 2013. Based on the longer-term policy goal of funding transfers based on depreciation expense net of debt principal payments, this analysis increases the annual transfers to about \$1.0 million by 2018. This increase reflects additional depreciation expenses projected on the projects in the CFP, which are offset by reductions in annual depreciation on existing assets (assets stop depreciating once they are fully depreciated).

EVALUATION OF REVENUE REQUIREMENTS

The revenue requirement analysis determines the annual revenue required to fund the projected operating expenses, capital costs, and policy-based requirements (e.g. reserve funding, replacement funding). In this evaluation, “revenue sufficiency” is defined by the following tests:

- ◆ **Cash Flow Test:** Rate revenue and other operating revenues must be sufficient to meet the utility's projected cash needs including O&M, debt service, replacement funding, and any reserve funding needed to meet the minimum balance target for the Operating Fund. The utility may have negative net cash flow when an explicit decision is made to use reserves to phase or “smooth” rate increases – in this analysis, the minimum balance requirement for the Operating Fund limits how far the Operating Fund balance can be drawn down for this purpose.

- ◆ **Coverage Test:** As previously noted, the City’s revenue bond covenants require that the City’s “net revenue” is equal to at least 1.25 times annual revenue bond debt service.

Table 3 summarizes the annual revenue requirement forecast through 2018.

Table 3: Revenue Requirement Forecast

| Revenue Requirement Analysis | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Revenues | | | | | | |
| Sewer Rate Revenue at Existing Rates | \$ 5,757,600 | \$ 5,805,350 | \$ 5,853,831 | \$ 5,943,878 | \$ 6,045,537 | \$ 6,149,019 |
| LOTT Revenues | 10,492,900 | 10,601,741 | 10,732,735 | 10,919,067 | 11,210,974 | 11,646,370 |
| Non-Rate Revenues | 3,600 | 5,290 | 4,112 | 3,551 | 6,607 | 6,532 |
| Total Revenues | \$ 16,254,100 | \$ 16,412,381 | \$ 16,590,678 | \$ 16,866,495 | \$ 17,263,117 | \$ 17,801,921 |
| Expenses | | | | | | |
| Cash Operating Expenses | \$ 4,809,342 | \$ 4,883,072 | \$ 4,965,222 | \$ 5,063,990 | \$ 5,163,893 | \$ 5,318,159 |
| LOTT Treatment Service | 10,492,900 | 10,601,741 | 10,732,735 | 10,919,067 | 11,210,974 | 11,646,370 |
| Debt Service | 624,027 | 623,140 | 620,403 | 622,399 | 619,343 | 594,933 |
| Replacement Funding | 741,301 | 742,000 | 800,000 | 900,000 | 1,051,639 | 1,007,454 |
| Total Expenses | \$ 16,667,570 | \$ 16,850,076 | \$ 17,118,489 | \$ 17,505,670 | \$ 18,046,074 | \$ 18,567,153 |
| Net Surplus (Deficiency) | \$ (413,470) | \$ (437,695) | \$ (527,811) | \$ (639,174) | \$ (782,957) | \$ (765,232) |
| <i>Annual Rate Adjustment</i> | 0.00% | 4.00% | 4.00% | 3.00% | 3.00% | 0.00% |
| <i>Cumulative Annual Rate Adjustment</i> | 0.00% | 4.00% | 8.16% | 11.40% | 14.75% | 14.75% |
| Rate Revenues After Rate Adjustment | \$ 5,757,600 | \$ 6,037,564 | \$ 6,331,503 | \$ 6,621,766 | \$ 6,937,069 | \$ 7,055,811 |
| Net Cash Flow After Rate Adjustment | (413,470) | (235,633) | (112,284) | (49,449) | (7,429) | 23,579 |
| Coverage After Rate Adjustment | 1.85 | 2.19 | 2.54 | 2.85 | 3.27 | 3.39 |
| <i>Ending Operating Fund Balance</i> | \$ 1,058,030 | \$ 822,398 | \$ 710,113 | \$ 660,664 | \$ 653,235 | \$ 676,814 |
| <i>Minimum Balance Required</i> | \$ 480,934 | \$ 488,307 | \$ 496,522 | \$ 506,399 | \$ 516,389 | \$ 531,816 |

Table 3 indicates a cash flow deficiency beginning in 2013, primarily due to increases in operating expenses over 2012 levels. Based on a review of actual 2012 versus budgeted 2013 expenses, the most significant increases are expected to occur in labor costs (an increase of about \$150,000, or 12% in salary and benefit costs) and pump station maintenance (another increase of about \$150,000). The rate revenue strategy shown in **Table 3** assumes that the existing Operating Fund balance is used to phase in the revenue increase needed to cover costs – based on this revenue strategy, **Table 3** shows the Operating Fund balance being drawn down by about \$795,000 over the study period.

CURRENT AND PROJECTED RATES

The City of Olympia’s wastewater rates are composed of charges for the local City conveyance system and pass-through charges for LOTT wastewater treatment. Residential customers pay a fixed bimonthly charge. Commercial customers pay both a fixed bimonthly charge and a volume charge per hundred cubic feet (ccf) of their metered water usage – the LOTT volume charge applies to usage over 9 ccf per month; to recognize recent downward trends in water consumption, the City recently reduced the threshold for its local volume charges from 9 ccf to 7 ccf per month (18 ccf to 14 ccf bimonthly).

Consistent with the underlying assumptions used in the revenue requirement forecast, the LOTT rates are increased annually with general cost inflation. Note that actual LOTT rates are subject to revision by LOTT’s Board and may vary from the inflationary adjustments assumed in this analysis. **Table 4** shows the wastewater rate forecast over the study period.

Table 4: Bimonthly Wastewater Rate Forecast

| Class | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Residential | | | | | | |
| City Fee | \$ 37.08 | \$ 38.56 | \$ 40.11 | \$ 41.31 | \$ 42.55 | \$ 42.55 |
| LOTT Fee | 67.98 | 69.27 | 70.73 | 72.07 | 73.37 | 75.57 |
| Total Fee | \$ 105.06 | \$ 107.83 | \$ 110.83 | \$ 113.38 | \$ 115.92 | \$ 118.12 |
| <i>Overall Change From Prior Year</i> | | 2.6% | 2.8% | 2.3% | 2.2% | 1.9% |
| Multi-Family [1] | | | | | | |
| City Fee | \$ 25.96 | \$ 27.00 | \$ 28.08 | \$ 28.92 | \$ 29.79 | \$ 29.79 |
| LOTT Fee | 47.59 | 48.49 | 49.51 | 50.45 | 51.36 | 52.90 |
| Total Fee | \$ 73.55 | \$ 75.49 | \$ 77.59 | \$ 79.37 | \$ 81.15 | \$ 82.69 |
| Commercial [2] | | | | | | |
| Fixed Rate | | | | | | |
| City Fee | \$ 37.08 | \$ 38.56 | \$ 40.11 | \$ 41.31 | \$ 42.55 | \$ 42.55 |
| LOTT Fee | 67.98 | 69.27 | 70.73 | 72.07 | 73.37 | 75.57 |
| Total Fee | \$ 105.06 | \$ 107.83 | \$ 110.83 | \$ 113.38 | \$ 115.92 | \$ 118.12 |
| Variable Rate (per ccf) | | | | | | |
| City Fee | \$ 2.65 | \$ 2.76 | \$ 2.87 | \$ 2.95 | \$ 3.04 | \$ 3.04 |
| LOTT Fee | 3.78 | 3.85 | 3.93 | 4.01 | 4.08 | 4.20 |
| Total Fee | \$ 6.43 | \$ 6.61 | \$ 6.80 | \$ 6.96 | \$ 7.12 | \$ 7.24 |

[1] The multi-family rates apply to each living unit in a multi-family building.

[2] City volume charges apply to commercial water usage over 14 ccf bimonthly; LOTT volume charges apply to commercial usage over 18 ccf bimonthly.

The rate forecast shown in **Table 4** assumes across-the-board adjustments to the existing wastewater rate structure. The City has requested the development of a tiered rate structure alternative for residential customers based on water use – though such a structure would be somewhat more complex to administer than the existing structure (the biggest challenge being to predict the number of residences that will be fall into each tier), the City currently administers a four-tiered residential water rate structure and should be able to accommodate a two-tiered wastewater rate structure. This analysis is still under development pending more analysis of the City’s customer water usage data; further information will be available once this study is complete.

AFFORDABILITY

The Department of Health and the Department of Commerce’s Public Works Board use an affordability index to prioritize low-cost loan awards depending on whether rates exceed 2.0% of the median household income for the service area. The median household income for the City of Olympia was \$52,371 in the 2007 – 2011 American Community Survey conducted by the U.S. Census Bureau, corresponding to a maximum annual wastewater bill of \$1,047.42, or \$174.57 bimonthly. The residential bills shown in **Table 4** are significantly below this threshold, suggesting an affordable wastewater rate structure.

GENERAL FACILITY CHARGE (GFC)

GFCs are a form of connection charge authorized in Section 35.92.025 of the Revised Code of Washington (RCW). GFCs are imposed on new customers connecting to the system as a condition of service, in addition to any other costs related to connecting a customer to the wastewater system. The GFC is typically based on a blend of historical and planned future capital investment in system infrastructure; its underlying premise is that growth (future customers) will pay for growth-related costs that the utility has incurred (or will incur) to provide capacity to serve new customers.

The City most recently conducted a review of its wastewater GFCs in 2010. Based on the recommendations of that study, this analysis assumes that the wastewater GFC is calculated using the same methodology as the City has been using to compute drinking water GFCs. The key components of the GFC calculation are described below.

- ◆ **Existing Cost Basis:** The GFC recovers a proportionate share of the cost of existing assets from growth. The total cost of the existing wastewater system is established from the City's fixed asset records, which indicate a total original cost of \$51.2 million for assets booked as of December 31, 2012. This initial cost basis is adjusted as follows:
 - Donated or grant-funded assets are excluded from the cost basis on the premise that the GFC should only recover costs actually incurred by the wastewater utility.
 - Outstanding debt principal, net of available cash balances, is deducted to recognize that new customers will be paying for their share of assets funded by this debt through their monthly user rates.
 - A provision for future asset retirements is also deducted from the existing cost basis. This provision, based on the projected cost of replacement projects in the CFP with adjustments for construction cost inflation, intends to recognize that these projects will replace existing assets. This adjustment is an alternative to excluding replacement project costs from the GFC cost basis, and recognizes that asset replacement project costs will generally cost more than the original construction costs included in the fixed asset schedule.
 - RCW 35.92.025 allows up to 10 years of interest to be added to the cost basis. Note that the GFC cost basis only includes interest accrued on assets that are included in the cost basis.
 - Construction work in progress is added to acknowledge investments that the wastewater utility has made in capital projects that are currently underway, but that have not been booked as assets or included in future CFP cost projections.
- ◆ **Future System Costs:** The GFC recovers a proportionate share of costs associated with future capital projects from growth to recognize that growth either directly drives or otherwise benefits from these projects. Capital projects identified in the 20-year CFP are separated between expansion projects (which provide increased capacity needed for growth and are allocated only to new growth), and upgrade and replacement projects (which benefit both existing and future customers). For the purpose of this calculation, inflation is backed out of the CFP project cost estimates to recognize that the GFC will be adjusted for future inflation as it occurs.
- ◆ **Customer Base:** The customer base is expressed in terms of Equivalent Residential Units (ERUs), which are defined in Section 13.08.190 of the Olympia Municipal Code as follows:
 - Single-family residences and duplexes are assigned 1 ERU per living unit.

- Multi-family residential properties with 3 or more units are assigned 0.7 ERUs per unit.
- Non-residential customers are assigned ERUs based on water usage. For City wastewater charges, an ERU is defined as 7 ccf per month.

As an initial starting point, the estimate of existing ERUs is based on the City’s budgeted LOTT payment and LOTT’s current monthly rate. Based on a budgeted 2013 LOTT expense of \$10,492,900 and a monthly rate of \$33.99, the City currently serves about 25,725 ERUs. [Note: This number is a preliminary estimate subject to further refinement, pending more detailed analysis of the City’s customer statistics.]

Growth projections are based on population projections published by the Thurston Regional Planning Council. Based on these projections, about 9,454 new ERUs will connect to the City’s wastewater system over the next twenty years (increasing the total ERU count to 35,179 by 2033).

Table 5 summarizes the updated wastewater GFC calculation:

Table 5: Wastewater GFC Calculation

| Existing Facilities Component | | Notes |
|--|-------------------|--|
| Existing Cost Basis | | |
| Plant-In-Service as of Year-End 2012 | \$ 51,209,831 | |
| Less: Contributions In Aid of Construction | (11,896,681) | |
| Less: Provision for Asset Retirements | (5,576,340) | Based on Replacement Projects Planned Through 2033 |
| Less: Net Outstanding Debt Principal | (2,641,786) | Outstanding Debt Principal Net of Cash Balances |
| Plus: Interest Accrued on Assets Included in GFC | 21,085,644 | |
| Plus: Construction Work In Progress | <u>13,259,576</u> | |
| Net Existing Cost Basis | \$ 65,440,245 | |
| Total Customer Base (Existing Plus Growth) | 35,179 | All Customers Through 2033 |
| Existing Facilities Charge per ERU | \$ 1,860 | Pro Rata Buy-In to Existing Capacity |
| Future Facilities Component | | |
| Future Cost Basis Allocable to All Customers | | |
| Projected Expenditures per CFP | \$ 20,181,744 | All Upgrade and Replacement Costs |
| Total Customer Base (Existing Plus Growth) | <u>35,179</u> | All Customers Through 2033 |
| Total Future Cost Basis Allocable to All Customers | \$ 574 | |
| Future Cost Basis Allocable to Growth | | |
| Projected Expenditures per CFP | \$ 8,917,376 | All Expansion Costs |
| Projected Growth | <u>9,454</u> | New Customers Through 2033 |
| Total Future Cost Basis Allocable to Growth | \$ 943 | |
| Future Facilities Charge per New ERU | \$ 1,517 | Pro Rata Share of Future Project Costs |
| Total Wastewater GFC per ERU | \$ 3,377 | Existing Facilities Charge + Future Facilities Charge |

The updated GFC for one ERU has increased by \$179 or about 5.5% from the current charge of \$3,199. As the current charge is based on inflationary adjustments to a historical GFC calculation, this increase is primarily attributable to new asset additions and the addition of future project costs to the CFP.

CONCLUSION

The City of Olympia's wastewater utility is in solid financial condition and, through this document, has a financial plan which enables it to meet projected capital and operational requirements outlined in this plan while maintaining reasonably affordable rates. The financial plan includes the following key elements:

- ◆ Fiscal policies which provide for a stable and predictable level of ongoing capital funding from rates.
- ◆ A capital funding strategy which relies on cash resources including reserves, GFC revenues and policy-based rate funding. Additional loans and revenue bonds would be considered to augment the cash funding sources as needed. In the event that additional debt issuance is required, the City should investigate and pursue low-cost loans and related assistance programs to the degree possible.
- ◆ An increase in the GFC to \$3,377 per equivalent residential unit to reflect the current pro rata share of system costs. The revenue requirement analysis assumes implementation of the updated GFC effective January 2014, increasing the charge annually with construction cost inflation.
- ◆ A series of low-to-moderate rate increases to accommodate the projected operating and capital needs of the wastewater utility (shown in **Table 3**). This results in a cumulative increase of roughly 15% from 2014 through 2018. Note that these projected rate increases are based on a series of assumptions discussed in this chapter – though the recommended financial structure is robust enough to accommodate a variety of unforeseen circumstances, the City should regularly review the fiscal health of the wastewater utility.